## **QUESTOR SYSTEMS**

	Figure	3.0.0-1	Questor Systems Sales and Bookings 1980-86	3.0	1			
	Table 3	.0.0-2	Questor Equipment VIC Codes	3.0	2			
3.3	Automatic Testing Systems (linear, memory, logic, burn-in, discrete)							
	3.3.1	Current	Industry Characteristics	3.3.1	1			
3.4	Material Handling Systems (probers, laser, repair stations, handlers, transfer & transport)							
	3.4.1	Current	Industry Characteristics	3.4.1	1			
3.5	Process Diagnostics (wafer inspection, mask inspection, materials monitoring, process monitors & curve tracers)							
	3.5.1	Current	Industry Characteristics	3.5.1	1			

## 3.0 QUESTOR SYSTEMS

Questor systems consist of those types of equipment used in the design, verification, handling, inspection and test of integrated circuits. This equipment, although critical in assuring device design or design performance or process performance, is distinct from either wafer fabrication or assembly.

The questor systems market composes approximately 35% of the total equipment market for all semiconductor manufacturing equipment. Exact percentages of the total segment and its subsegments will be found in the database sections of each of the following chapters.

As a point of reference, historical sales and bookings are shown in Figure 3.0.0-1. The questor systems equipment market reached an all-time sales peak of \$2200M in the mid-eighties. However, this market—just as others—was adversely affected by the slow-down in 1985 & 1986.

Figure 3.0.0-2 lists the Questor Systems VIC product code used throughout, by VLSI Research.

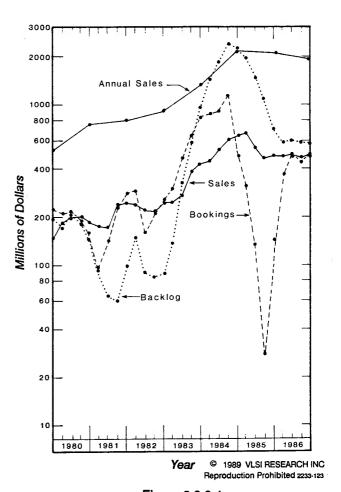


Figure 3.0.0-1

QUESTOR SYSTEMS

SALES AND BOOKINGS 1980-86

## **TABLE 3.0.0-2**

## **QUESTOR EQUIPMENT VIC CODES**

VLSI Research uses a standard industry code that is self-consistent throughout all VLSI Research databases-both those provided in printed media and those on magnetic media. The code is called the VIC code for 'VLSI Research Industry Code'. A complete code listing can be obtained by ordering the document entitled 'Master Source Codes in use at VLSI Research'. Abbreviated portions are found throughout this document. The VIC code numbering system follows the section-by-section outline of 'The VLSI Manufacturing Outlook'. For questor systems equipment it is as follows:

00.00	Questo	Systems			1			345.43	Burn-in Transfer Systems
.00.00		Questor Systems 330.00 Automated Test Systems			i			345.44	Cassette-to-boat transfer systems
	000.00		Logic A					345.45	Cassette-to-susceptor Transfer Systems
		202100	333.30	VLSI Logic Test Systems				345.46	SMIF Systems
				333.33 Class 0 Logic Test Systems	350.00	Process	Diagnos	tic Equip	
				333.34 Class 1 Logic Test Systems		353.00			Equipment
				333.35 Class 2 Logic Test Systems	ł				ory Instruments
				333.36 Class 3 Logic Test Systems	Į			353.33	FTIR
				333.37 Class 4 Logic Test Systems	1			353.34	Film Thickness Instruments
				333.38 Class 5 Logic Test Systems	ł			353.35	Wafer Flatness Instruments
				333.39 Class 6 Logic Test Systems	1			353.36	Surface Profiling Instruments
			333.40	General Purpose Logic Test Systems	1			353.37	Wafer Measuring Instruments
				333.43 Class 7 Logic Test Systems	1			353.38	Energy Dispersion Systems
			333.50	Focused Logic Test Systems	I			353.39	Misc Metrology Tools
			333.60	Dedicated Logic Test Systems	į.		353,40	Electric	al Instruments
			333.70	Complex VLSI Logic Test Systems	1			353.43	CV & DLTS Plotters
		334.00	Memor	y Component Test Equipment	ì			353.49	Misc Electrical Measuring Tools
			334.30	General Purpose Memory Test Systems	1		353.50	CD Mea	asuring Tools
			334.40	Dedicated Memory Test Systems	1			353.53	Linewidth Instruments
			334.50	Bubble Memory Test Systems	1			353.54	LoV SEM's
		335.00	Linear i	IC Test Systems	1			353.55	Conventional Imaging Systems
			335.30	Analog LSI Test Systems	1			353.56	Coherent Scanning Laser Microscopes
			335.40	Focused Analog Test Systems	1			353.57	Coherent Scanning Optical Microscope
			335 <b>.5</b> 0	General Purpose Linear Test Systems	1			353.58	Coherence Probe Microscopes
			335.60	Dedicated Linear Test Systems	1		353.60	Defect I	nspection Tools
			335.70	Traditional Linear Test Systems	1			353.63	Automated Defect Inspection Systems
			335.80	Mixed Signal Linear Test Systems	ſ			353.64	Manual Defect Measuring Tools
				335.83 Mixed Signal 1 Linear Test Systems	1			353.65	Surface Particulate Scanners
				335.84 Mixed Signal 2 Linear Test Systems	1		353.70	General	Purpose Microscopy Tools
				335.85 Mixed Signal 3 Linear Test Systems	ı			353.73	HiV SEMs
		336.00		e Test Systems				353.79	Mise Microscopy Tools
		337.00		Systems		354.00			Inspection
			337.30	Monitored Burn-in	1				aster Inspection Systems
			337.40	Dynamic Burn-in	ı				Inspection Systems
			337.50	Static Burn-in	ì				epair Systems
				formance Monitors					ualification Systems
	340.00			ng Systems		355.00			ing & Curve Tracers
		343.00		robing & Laser Repair Stations					tic Process Monitors
			343.30	Automatic Probing Equipment	1			Curver t	
				343.33 Semi-Automatic Wafer Probers		356.00			oring Systems
			242.40	343.34 Fully-Automatic Wafer Probers			356.30		onitoring Systems
			343,40	Manual Wafer Probers	1				Monitoring Systems
			343.60	Laser Repair Stations	260.00	cnrc		Gas Mo	nitoring Systems
				343.63 IC Trim	360.00	CIM Sys		CNI	
				343.64 IC Repair	1	363.00	Global		
		244.00	Dagles	343.65 Hybrid Trim	1	364.00	Cellula		
		344.00		Handling Equipment DIP Handlers	I	365.00	Networ		
			344.30		270.00	366.00		tion Soft	
			344.40	LCC Handlers	370.00			on Softwa	
			344.50	Transistor Handlers	1	373.00			on Systems
			344.60	SO Handlers	1				ification Systems
		245.00	344.70	Misc. Handlers	1	221.00			Diagnostic Systems
		345.00		ort & Transfer Equipment	1	374.00		aterface T	
			345.30 345.40	Transport Systems Transfer Systems	i		374.30	CAD/D	esign Verif/Test Interface Tools lasking Interface Tools